

**VOLTAGE RANGE: 50 - 1000V**

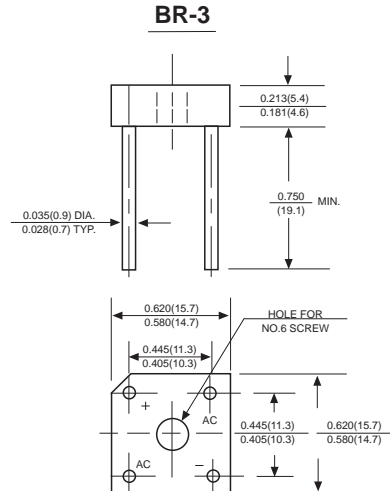
**CURRENT: 3.0 A**

### Features

- The plastic package carries Underwriters Laboratory
- Flammability Classification 94V-0
- Ideal for printed circuit boards
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:  
260°C/10 seconds, at 5 lbs. (2.3kg) tension

### Mechanical Data

- Case: Molded plastic body
- Terminals: Plated leads solderable per MIL-STD-750, per MIL-STD-750, Method 2026
- Polarity: Polarity symbols marked on case
- Mounting: Thru hole for #6 screw, 5in.-lbs. torque max.
- Weight: 0.093 ounce, 2.62 grams



Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

MDD Catalog Number	Symbol	KBPC 1005	KBPC 101	KBPC 102	KBPC 104	KBPC 106	KBPC 108	KBPC 110	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	VOLTS
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	VOLTS
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	VOLTS
Maximum average forward output rectified current at $T_A=50^\circ\text{C}$ (Note 2) and $T_A=25^\circ\text{C}$ (Note 3)	$I_{(AV)}$	3.0 2.0						Amps	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	60						Amps	
Rating for Fusing ( $t < 8.3\text{ms}$ )	$I^2t$	15						$\text{A}^2\text{s}$	
Maximum instantaneous forward voltage drop per bridge element at 1.5A	$V_F$	1.0						Volts	
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ and $T_A=100^\circ\text{C}$	$I_R$	10						$\mu\text{A}$	
		0.5						mA	
Typical Junction Capacitance (Note 1)	$C_J$	20						pF	
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	12						$^\circ\text{C}/\text{W}$	
Operating junction temperature range	$T_J$	-55 to +125						$^\circ\text{C}$	
storage temperature range	$T_{STG}$	-55 to +150						$^\circ\text{C}$	

**NOTES:**

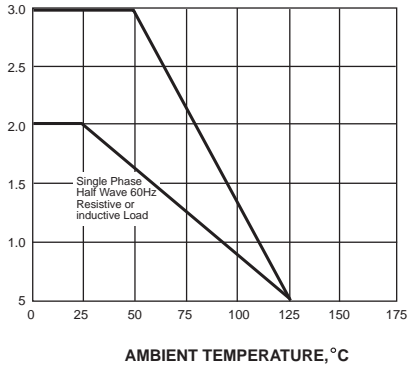
1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
2. Unit mounted on 4.0" x 4.0" x 0.11" thick (10.5x10.5x0.3cm) Al. plate.
3. Unit mounted on P.C. board with 0.5" x 0.5" (12x12mm) copper pads, 0.375" (9.5mm) lead length.



## RATINGS AND CHARACTERISTIC CURVES KBPC1005 THRU KBPC110

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



PEAK FORWARD SURGE CURRENT, AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

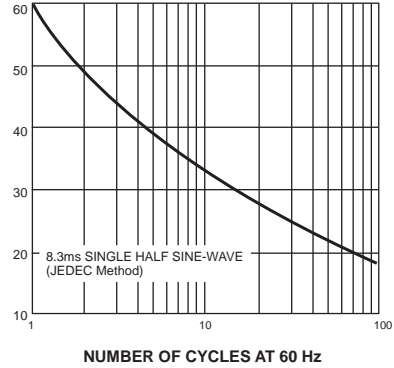
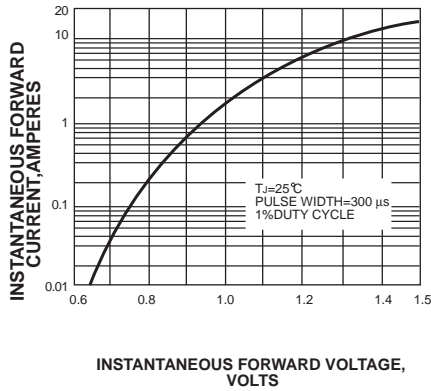


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS

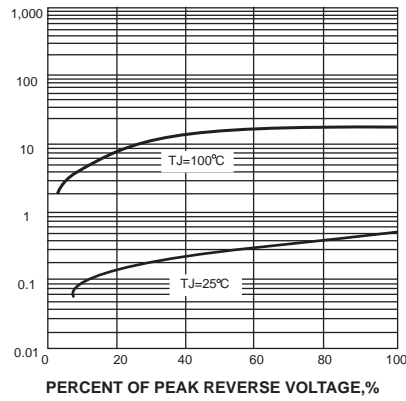
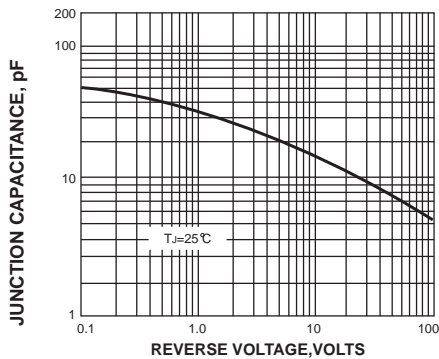


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  $^{\circ}\text{C}/\text{W}$

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

